

DISCUSSION OF THE CLAIMS

Claims 1, 3-4, 6-19, and 32-39 are active in the present application. Claims 2, 5 and 20-31 are canceled claims. Claims 36-39 are new claims. Support for new Claims 36-38 is found in the examples. Support for new Claim 39 is found in the previously presented claims. Independent Claim 1 is amended herein for clarity and to include the features of previously presented Claim 5. The dependent claims are amended for clarity and for consistency with the amendment to Claim 1.

No new matter is added.

REMARKS

Present Claim 1 includes the features of previously presented Claim 5. Claim 5 was not rejected as anticipated over Penth (US 2002/0023874) or Hennige (DE 10115928).

The Office rejected previously presented Claim 5 as obvious over the combination of Penth with Visco (US 2004/0126653) or Michot (US 2008/0213661). The Office relied on Visco and Michot as evidence that certain compounds recited in previously presented Claim 5 have been used in ceramic materials and/or in electrolytic devices such as batteries.

Applicants submit that the Visco and Michot publications disclose the use of certain compounds in environments and applications that are entirely different from the structure of present Claim 1. For example, Claim 1 requires the presence of a layer of fine particles of a second material covering the first layer of the porous ceramic material. It is thus a requirement of present Claim 1 that the second material, i.e., that material which may include particles of the materials recited in previously presented Claim 5, must be in the form of a layer of fine particles.

Visco fails to disclose a particulate form of any of the second materials of present Claim 1. It appears that the Office placed great weight on Visco's disclosure that Li_3N layers may be present in electrochemical devices (see page 12 of the September 9, 2009 Office Action). Visco discloses the use of this material in environments that are entirely different from the environment and structure of present Claim 1. For example, in paragraph [0013] Visco discloses the use of Li_3N in contact with metal. Such a structure is excluded by present Claim 1 wherein the fine particles are in contact with a porous ceramic material, not an active metal such as a metallic anode or cathode.

Further still, Visco does not disclose the use of particles of Li_3N . In paragraph [0065] Visco discloses that materials such as Li_3N are deposited on "substantially impervious" materials. In contrast, the separator of present Claim 1 is porous.

Applicants submit that Visco's description of the use of materials such as Li_3N is not germane to the presently claimed invention for the reasons that the materials of Visco are not in particulate form and are used in applications having substantially different structure from that of the separator of present Claim 1. In essence the Office has not provided sufficient basis from which to assert a prima facie case of obviousness.

As discussed above, present Claim 1 requires a second layer of fine particles. Michot, like Visco, fails to disclose a layer of particles such as that recited in present Claim 1. Michot appears to disclose compositions that contain materials such as the LiAlO_2 mentioned in paragraph no. 16 on page 12 of the September 9 Office Action. However, these compounds are present as mixtures with polymeric materials. In fact, paragraph [0042] of Michot discloses that the polymers are formed and/or molded in the presence of the LiAlO_2 .

Applicants submit that it is readily recognized by those of ordinary skill in the art that such a composition is a dispersion of the LiAlO_2 in the polymer. A dispersion of an inorganic material in a polymer matrix is in no way similar and in no way suggests a layer of fine particles covering a porous ceramic material. Further in this regard, Applicants draw the Office's attention to the new dependent claims which recite layers that consist of the first porous ceramic material and the second material. Applicants submit the new dependent claims are further patentable over the combination of Michot and Penth for the reason that the cited art fails to disclose or suggest any particulate layer meeting the requirements of at least the second layers recited in present Claim 1.

For the reasons set forth above, Applicants submit that the present claims are novel and not obvious in view of the art cited in the September 9, 2009 Office Action and respectfully request withdrawal of the rejection.

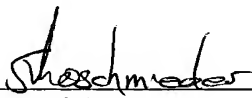
Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, L.L.P.
Norman F. Oblon

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413-2220
(OSMMN 06/04)



Stefan U. Koschmieder, Ph.D.
Registration No. 50,238